

Remarks:

The above amendments and these remarks are responsive to the Office action dated September 22, 2005.

Prior to entry of the present Amendment, claims 1-5, 7, 9-14, 38-40 and 42-45 remained pending in the application. Claims 9-12 and 42-45 have been allowed. Claims 1-5, 7, 13-14 and 38-40 have been rejected under 35 U.S.C. §103(a) based on Kiser et al. (US 2003/0228154 A1) in view of Levitt et al. (US 6,061,135). Applicants respectfully traverse the rejection under 35 U.S.C. §103(a).

Nevertheless, in the interest of furthering prosecution of the present application, applicants have amended claims 13 and 38 to more clearly set forth the claimed invention(s). Claims 39 and 40 have been cancelled without prejudice.

In view of the amendments above, and the remarks below, applicants respectfully request reconsideration of the application under 37 C.F.R. § 1.111 and allowance of the pending claims.

Rejections under 35 USC § 103

As noted above, claims 1-5, 7, 13-14 and 38-40 stand rejected under 35 U.S.C. §103(a) based on Kiser et al. in view of Levitt et al.

Kiser et al. discloses a spatial light modulating (SLM) device including an addressable array of elements segmented into three different-color subarrays. However, as acknowledged by the Examiner in the present Office action (see, page 5), Kiser et al. does not disclose a spatial image separator configured to assign received image information to a corresponding one of the image regions. The Examiner thus cites Levitt et al.

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Levitt et al. discloses a spatial image separator that relocates segments of an incident image pattern onto a single photodetector. More particularly, Levitt et al. describes an Optical Phase Measurement (OPM) processor that employs the spatial image separator to "deflect and coherently combine light" to a respective one of three photodetector elements. See, Col. 4, lines 41-61. Levitt et al. does not spatially separate image data to form images in each of plural image regions. In fact, the express purpose of Levitt et al. is to coherently combine light from plural image elements onto a single photodetector element.

Applicants assert that Levitt et al. is not combinable with Kiser et al. as the Examiner proposes. As noted, Levitt et al. seeks to combine light from plural image elements onto a single photodetector element. Kiser et al. employs an addressable array of elements segmented into three different-color subarrays. If Kiser et al. were modified to employ the "spatial image separator" of Levitt et al., only coherently combined light would be incident on each subarray. There would be no separated images.

Furthermore, inasmuch as Kiser et al. seeks to achieve separate images, and Levitt et al. seeks to coherently combine sections of an image pattern, it would not be obvious to one of ordinary skill in the art to apply the teachings of Levitt et al. to Kiser et al. light from these opposite teachings. For at least this reason, the proposed combination is improper, and the rejection under 35 U.S.C. §103(a) based on Kiser et al. in view of Levitt et al. must be withdrawn.

Turning now to the particular claims, applicants note that claim 1 recites:

1. A display device comprising:
 - a spatial light modulator having an array of modulating elements forming a plurality of image regions;
 - a light generator configured to direct a different one of a plurality of light bands onto each of the plurality of image regions; and
 - a controller including a spatial image separator configured to assign received image information to a corresponding one of the image regions, the controller being configured to control modulation of the spatial light modulator appropriate to produce a separate image in each image region.

As indicated generally above, neither Kiser et al. nor Levitt et al. disclose or suggest a controller "configured to control modulation of the spatial light modulator appropriate to produce a separate image in each image region." Levitt et al. discloses coherently combining sections of an image pattern at each of plural photodetectors, and thus does not disclose producing separate images in each image region. The Examiner acknowledges that Kiser et al. also fails in this regard.

For at least the foregoing reasons, neither Kiser et al. nor Levitt et al., nor any combination thereof, disclose or suggest the display device recited in claim 1. Claim 1 thus is allowable over Kiser et al. and Levitt et al., and the rejection of claim 1 under 35 U.S.C. §103(a) must be withdrawn. Claims 2-5 and 7 depend from claim 1, and thus are distinguishable from Kiser et al. and Levitt et al. for at least the same reasons as claim 1. Claims 2-5 and 7 thus are allowable over Kiser et al. and Levitt et al., and the rejection of claims 2-5 and 7 also must be withdrawn.

As amended, claim 13 recites:

13. A display device comprising:
a light source configured to produce multi-spectral light;
a spatial light modulator configured to modulate light received in a plurality of regions according to component images of a received composite image;
an optical separator configured to separate multi-spectral light into a plurality of colored light bands, and to direct the light bands onto the regions of the spatial light modulator;
an optical combiner configured to combine the modulated light bands into a composite light band; and
a controller configured to control modulation of the spatial light modulator appropriate to produce differently colored multi-pixel component images of a multi-pixel composite image, the controller including a spatial image separator configured to assign received image information to a corresponding one of the image regions based on color.

As indicated above, neither Kiser et al. nor Levitt et al. disclose or suggest a controller including "a spatial image separator configured to assign received image information to a corresponding one of the image regions based on color" as recited in claim 13. As acknowledged by the Examiner, Kiser et al. fails to disclose or suggest assigning received image information to a corresponding one of the image regions in any manner. Levitt et al. fails to disclose or suggest assigning received image information to a corresponding one of the image regions based on color. Levitt et al. also teaches contrary to controlling modulation of a spatial light modulator "to produce differently colored multi-pixel component images of a multi-pixel composite image" as recited in claim 13. Levitt et al. discloses coherently combining sections of an image pattern at each of plural photodetectors.

For at least the foregoing reasons, neither Kiser et al. nor Levitt et al., nor any combination thereof, disclose or suggest the display device recited in claim 13. Claim 13 thus is allowable over Kiser et al. and Levitt et al., and the rejection of claim 13 under 35 U.S.C. §103(a) must be withdrawn. Claim 14 depends from claim 13,

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and thus is distinguished from Kiser et al. and Levitt et al. for at least the same reasons as claim 13. Claim 14 thus is allowable over Kiser et al. and Levitt et al., and the rejection of claim 14 also must be withdrawn.

Claim 38 recites:

38. A display device comprising:
a spatial light modulator having an array of modulating elements configured to spatially modulate incident light; and
a controller configured to control modulation of the spatial light modulator appropriate to produce a differently-colored multi-pixel component image, in each of a plurality of separate image regions of the array of modulating elements according to received image information, the multi-pixel component images corresponding to images of different colors that when combined form a multi-pixel composite color image, where the controller further includes a spatial image separator configured to assign received image information to a corresponding one of the image regions to produce a corresponding multi-pixel component image in the image region.

Neither Kiser et al. nor Levitt et al. disclose or suggest a controller including "a spatial image separator configured to assign received image information to a corresponding one of the image regions to produce a corresponding multi-pixel component image in the image region" as recited in claim 38. The Examiner acknowledges that Kiser et al. fails to disclose or suggest assigning received image information to a corresponding one of the image regions in any manner. Levitt et al. fails to disclose or suggest assigning received image information to a corresponding one of the image regions to produce a corresponding multi-pixel component image in the image region. In fact, as indicated above, Levitt et al. teaches contrary to controlling modulation of a spatial light modulator "to produce differently colored multi-pixel component images of a multi-pixel composite image." Levitt et al. discloses coherently combining sections of an image pattern at each of plural photodetectors.

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For at least the foregoing reasons, neither Kiser et al. nor Levitt et al., nor any combination thereof, disclose or suggest the display device recited in claim 13. Claim 38 thus is allowable over Kiser et al. and Levitt et al., and the rejection of claim 38 under 35 U.S.C. §103(a) must be withdrawn.

Conclusion

Applicants believe that this application is now in condition for allowance, in view of the above amendments and remarks. Accordingly, applicants respectfully request that the Examiner issue a Notice of Allowability covering the pending claims. If the Examiner has any questions, or if a telephone interview would in any way advance prosecution of the application, please contact the undersigned attorney of record.

Respectfully submitted,

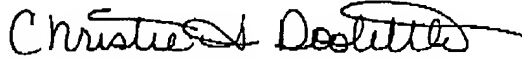
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CERTIFICATE OF FACSIMILE TRANSMISSION

I hereby certify that this correspondence is being facsimile transmitted to Examiner M. Cruz, Group Art Unit 2851, Assistant Commissioner for Patents, at facsimile number (571) 273-8300 on December 22, 2005.



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